CLAIMS

We claim:

1. A method for determining an individual's intensity of focused attention, comprising the steps of:

a. obtaining a representative frontal lobe brainwave signal from at least one first sensor in an electrically connective relation to said individual's frontal lobe;

b. obtaining a representative reference signal from at least one second sensor in an electrically connective relation to a more electrically-neutral location;

c. subtracting said representative reference signal from said representative frontal lobe brainwave signal to produce a difference frontal lobe brainwave signal, and processing said difference frontal lobe brainwave signal to produce an AIndicator signal indicative of said individual's intensity of focused attention, where said AIndicator signal is inversely proportional to any mathematical transformation of an amplitude measure of said difference frontal lobe brainwave signal;

d. inputting said AIndicator signal to a device; and,

e. repeating steps a-d, as desired.

2. The method of claim 1, where said at least one first sensor

obtains said frontal lobe brainwave signal within an area bounded by two lines, each line running between said individual's two earlobes, one line passing through the shallowest portion of the individual's nose called the nasion and the other line passing through a point one inch forward of the highest, most central part of the individual's head called the vertex.

3. The method of claim 2, where said at least one first sensor measures said frontal lobe brainwave signal at a location within two inches either side of a bisector line, said bisector line being transverse to both of said two lines and dividing said area into two equal pieces.

4. The method of claim 3, where said at least one second sensor obtains said representative reference signal from at least one of said individual's earlobes.

5. The method of claim 1, where said AIndicator signal represents an aggregate amplitude level of said difference frontal lobe brainwave signal over a low frequency band.

6. The method of claim 5, where said low frequency band is limited to frequencies of not more than 40 Hertz.

7. The method of claim 1, where said AIndicator signal represents an aggregate power level of said difference frontal lobe brainwave signal over a low frequency band.

8. The method of claim 7, where said low frequency band is limited to frequencies of not more than 40 Hertz.

9. The method of claim 1, where the step of processing said difference frontal lobe brainwave signal includes rejecting eye movement and other artifacts.

10. The method of claim 1, where said device is a computer and where said AIndicator signal inputted thereto is used by a program running on said computer to provide said individual with an indication of said individual's intensity of focused attention.

11. The method of claim 1, where said device is a computer and where said AIndicator signal inputted thereto is used by a program running on said computer to affect said program's execution.

12. The method of claim 11, where said device receives at least one other input signal and where said AIndicator signal supplements an effect of said at least one other input signal.

13. The method of claim 12, where said device receives at least one additional input signal and where said AIndicator signal does not supplement said effect of said at least one additional input signal.

14. The method of claim 11, where said AIndicator signal used by

said program affects what is presented to said individual.

14. 15. The method of claim 11, where said AIndicator signal used by said program affects what is presented to another individual.

15. 16. The method of claim 11, where said AIndicator signal used by said program affects what is presented to said individual.

16. 17. The method of claim 11, further including the step of classifying said individual into a selected class of individuals and using said AIndicator signal from previous individuals in said selected class to affect what is presented to said individual.

17. 18. The method of claim 1, where said device functions as a recorder and where said AIndicator signal is recorded and correlated to at least one event.

18. 19. The method of claim 17, where said AIndicator signal from a plurality of individuals is simultaneously recorded and correlated to at least one event.

19. 20. The method of claim 1, where said at least one first sensor comprises more than one first sensor, and where said representative frontal lobe brainwave signal is a combination of a plurality of frontal lobe brainwave signals, each of said plurality of frontal lobe brainwave signals being obtained from a different one of said at least one first sensor.

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21. The method of claim 1, where said at least one second sensor comprises more than one second sensor, and where said representative reference signal is a combination of a plurality of reference signals, each of said plurality of reference signals being obtained from a different one of said at least one second sensor.

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22. The method of claim 1, where said first sensor is provided in a flexible holder receivable on said individual's head.

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23. The method of claim 22, where said flexible holder further comprises:

a. a flexible band member that can exert pressure to hold said at least one first sensor in electrically connective relation to said individual's head;

b. a first sensor unit attached to said flexible band member, said first sensor unit including a first sponge receiving said first sensor;

c. where said first sensor unit is spaced so that when said flexible holder is placed on said individual's head, said first sensor will be in a first location to obtain said representative frontal lobe brainwave signal.

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24. The method of claim 23, where said first sponge has a trapezoidal shaped cross-section having a triangular portion and

a rectangular portion, said triangular portion engaging said flexible band member.

24. 25. The method of claim 23, where said first sponge is partly covered by a flexible, electrically-isolating glue compound thereby creating a fluid reservoir.

25. 26. The method of claim 24, where said glue compound is used to attach said first sensor unit to said flexible band member.

26. 27. The method of claim 25 where a hook and loop fastener is used to attach said first sensor unit to said flexible band member.

27. 28. The method of claim 23, where said flexible band member is an elastic band member.

28. 29. The method of claim 22, where said flexible holder is a headphone with at least one extender made of flexible metal attached thereto, said at least one extender having a first sensor unit attached thereto, said first sensor unit including said at least one first sensor, where said first sensor unit is spaced so that when said headphone is placed on said individual's head, said first sensor will be in a first location to measure said frontal lobe brainwave signal.

29. 30. The method of claim 28, where said headphone includes at least one earpiece, said at least one earpiece receiving a second

sensor unit, said second sensor unit including said at least one second sensor.

31. A method for using a brainwave signal to affect a program running on a computer, comprising the steps of:

a. providing a sensor to measure a brainwave signal;

b. measuring said brainwave signal with said sensor and processing said brainwave signal to produce a processed signal;

c. inputting said processed signal to said computer, where said computer receives at least one other input signal from at least one other input device and where said processed signal changes an effect of said at least one other input signal; and

d. repeating steps b and c, as desired.

32. A method for using a brainwave signal to affect a program running on a computer, comprising the steps of:

a. providing a sensor to measure a brainwave signal;

b. measuring said brainwave signal with said sensor and processing said brainwave signal to produce a processed signal; and

c. inputting said processed signal to said computer and using said processed signal to modify a logic driving said

program.